

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
19 May 2005 (19.05.2005)

PCT

(10) International Publication Number
WO 2005/044880 A1

(51) International Patent Classification⁷: **C08F 220/18**,
C09J 133/06, C08F 2/26

(21) International Application Number:
PCT/EP2004/052827

(22) International Filing Date:
5 November 2004 (05.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/517,870 7 November 2003 (07.11.2003) US

(71) Applicant (for all designated States except US): **SURFACE SPECIALTIES, S.A.** [BE/BE]; Allée de la Recherche, 60, B-1070 Brussels (BE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **PERNECKER, Tibor** [HU/US]; 11 Margaret Drive, Wilbraham, Massachusetts 01095 (US). **CHEN, Augustin** [US/US]; SURFACE SPECIALTIES, Inc., Indian Orchard 730 Worcester Street, Springfield, Massachusetts 01151 (US). **GUO, Jong-Shing** [CN/US]; SURFACE SPECIALTIES, Inc., Indian Orchard 730 Worcester Street, Springfield, Massachusetts 01151 (US).

(74) Agents: **KIRK, Martin et al.**; Surface Specialties, S.A., Allée de la Recherche, 60, B-1070 Brussels (BE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **ADHESIVE COMPOSITION**

(57) Abstract: There is described a process for preparing a pressure sensitive adhesive having enhanced resistance to water-whitening comprising the steps of: (a) forming a mixture in water of (i) an effective initial amount of a polymerization initiator which produces radicals by a thermal decomposition to form a mixture and optional further surfactant; (ii) an effective amount of a water-dispersible polymerizable surfactant with a terminal allyl amine moiety; polyoxyalkylene-1-(allyloxymethyl) alkyl ether sulfate salt(s) and/or mixtures thereof, (b) forming a polymerizable aqueous pre-emulsion comprising (i) a hydrophobic monomer mixture comprising at least one alkyl (metha)acrylate ester of an C₁₋₄ alcohol and up to about 30 % by weight of the mixture of at least one styrenic monomer, (ii) at least about 1 % of the total weight of (i) to (iii) of one or more hydrophilic monomer(s), (iii) at least about 5 % of the total weight of (i) to (iii) of at least one partially hydrophilic monomer(s) selected from N-vinyl pyrrolidone; alkyl (metha)acrylate esters of methanol or ethanol; and/or mixtures thereof, the pre-emulsion further comprising effective amounts of the surfactant (c) contacting the pre-emulsion with the water mixture; (d) continuously adding said pre-emulsion to said mixture to polymerize said pre-emulsion to form a latex emulsion, and optionally adding further polymerization initiator during the polymerization of said pre-emulsion; and (e) optionally adjusting the pH of said latex emulsion with a suitable base to a pH 5 of about 6.5 to about 9.

WO 2005/044880 A1